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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,311	04/13/2004	Che-Hsiung Hsu	UC0423USNA	4769
23906 7590 12/17/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER YAMNITZKY, MARIE ROSE	
			ART UNIT 1794	PAPER NUMBER
			NOTIFICATION DATE 12/17/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

## Office Action Summary

**Application No.**

10/823,311

**Applicant(s)**

HSU ET AL.

**Examiner**

Marie R. Yamnitzky

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 13-15 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 16-18, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12 Sep 2007.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on August 27, 2007 (amendment) and September 12, 2007 (IDS) have been entered.

2. Applicant's amendment filed August 27, 2007 amends claims 1, 3-5, 17 and 18, and adds claims 20 and 21.

Claims 1-21 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The claims remain subject to an election of species requirement. Claims 1-12, 16-18, 20 and 21 read on the elected species, with claims 3-5 and 9-12 being interpreted as further defining one of several materials that may be used, but not as requiring the material that is further defined.

4. Claims 13-15 and 19 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 19, 2006. Withdrawn species claims will be subject to further consideration upon allowance of a generic or linking claim.

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5. The objection to claim 17 under 37 CFR 1.75(c) as set forth in the Office action mailed June 25, 2007 is overcome by claim amendment.

The rejections under 35 U.S.C. 102(b) and 103(a) based on the article by C.-H. Hsu in *Synthetic Metals*, 41-43 (1991), pp. 671-674, are withdrawn in consideration of the amended claim language. The examiner does not necessarily agree that the composite described by Hsu does not meet the present claim limitations, particularly as Hsu's composite described in the paragraph bridging pages 672 and 673 has different regions of different composition. However, since other applied art clearly describes different layers of different compositions meeting the limitations of the same claims as previously rejected using the Hsu article, rejections based on the Hsu article are deemed unnecessary regardless of whether Hsu's composite anticipates or suggests the present claim limitations.

6. Claims 1-12, 16-18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohtani et al. (US 4,869,979).

See the whole patent. In particular, see column 3, lines 4-36, c. 4, l. 4-16 and 40-44, and claims 6-10.

Ohtani et al. describe an electronic device in which a layer of Nafion (within the scope of the colloid-forming polymeric acid required by the present claims) is adjacent to, and in physical contact with, a layer of doped conductive polymer such as doped polythiophene, polypyrrole or polyaniline. The layer of Nafion has a different composition than the layer of doped conductive polymer.

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7. Claims 1-12, 16-18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kokonaski et al. (US 2004/0217877 A1).

See Figures 4, 4A, 5 and 5A, and paragraphs [0025] and [0026]. Kokonaski et al. teach using PEDOT:PSS and Nafion in adjacent layers in electronic devices. These adjacent layers have different compositions and, as shown in Fig. 4A and 5A, at least a portion of the PEDOT:PSS layer is in physical contact with the Nafion layer. PEDOT:PSS anticipates applicant's elected species for the first layer material, and Nafion anticipates applicant's elected species for the second layer material. Kokonaski et al. also teach that conductive polymers such as polyaniline or polypyrrole may be used in place of PEDOT:PSS.

Kokonaski's patent application claims priority to several provisional and non-provisional U.S. patent applications. Two of the priority provisional applications (60/457,115, filed March 21, 2003, and 60/460,353, filed April 03, 2003) provide support for the subject matter relied upon in the present rejection.

8. Claims 1-12, 16-18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsu et al. (US 2004/0102577 A1).

The applied reference has a common inventor with the instant application, but a different inventive entity. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the

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reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

See the whole publication. In particular, see paragraphs [0002]-[0006], [0025]-[0048], [0065]-[0068], [0090], [0124]-[0125], [0130]-[0131], [0139]-[0143] and claims 39-42.

Examples 11 and 12 describe a light-emitting diode comprising a two-layered buffer in which a layer consisting of a doped conductive polymer (the layer of CH8000) is in physical contact with a layer which comprises a colloid-forming polymeric acid (the layer of PEDT/Nafion®). The two layers of the two-layered buffer have a different composition from each other.

9. Claims 1-12, 16-18 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Gryko et al. (US 6,324,091 B1).

See Fig. 1, Fig. 4, col. 23, lines 60-65 and c. 26, l. 34-58. Gryko’s teaching that organic conductors such as doped polyacetylene or doped polythiophene may be used instead of gold in a composite comprising, in the order listed, a layer of gold, a monolayer of self-assembled porphyrinic nanostructures, and a layer of Nafion®, anticipates a composite according to the present claims in which at least one additional layer is interposed between a first layer comprising at least one doped conductive polymer (such as doped polythiophene) and a second layer comprising a colloid-forming polymeric acid (such as a perfluorinated polymeric sulfonic acid available under the trademark Nafion®).

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10. Applicant's arguments filed August 27, 2007 have been fully considered but they are not persuasive.

With respect to the rejection based on the patent to Ohtani et al., applicant argues that Ohtani does not anticipate the present claims because Ohtani does not disclose a bi-layer composite and requires a third component (the metal anode which must be in contact with the electrolyte) which is not in the present claims. This argument is not persuasive as Ohtani anticipates the first layer and the second layer as defined in the rejected claims, and the present claim language is open to other unspecified components/layers.

With respect to the rejection based on the published application of Kokonaski et al., applicant argues that Kokonaski does not teach that the conductive polymers are doped, and does not teach a bi-layer composite. Applicant's arguments traversing this rejection imply that PEDOT:PSS does not meet the limitations of a doped conductive polymer. The examiner notes that this implication is contrary to the teachings of the present disclosure (e.g. see page 8, line 31-p. 9, l. 22 and Example 2 on p. 25). Kokonaski discloses composites having two layers meeting the limitations of the first and second layers required by the rejected claims, and additional layers in Kokonaski's composites are not excluded by the present claim language.

With respect to the rejection based on the published application of Hsu et al., the examiner has modified the rejection to reference Hsu's Examples 11 and 12, which disclose a bi-layer buffer composite having two layers of different composition in physical contact with each other, one of the two layers meeting the limitations of the first layer of the presently claimed

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composite and the other of the two layers meeting the limitations of the second layer of the presently claimed composite.

The rejection based on the patent to Gryko et al. is a new rejection added to address the limitations of new claim 21, which are not met by the previously applied prior art.

11. With respect to the foreign patent documents listed on the PTO-1449 filed September 12, 2007, it appears that copies of the two WO references were not filed by applicant, and only abstracts were filed for the three JP references. The examiner has only considered what has been filed.

12. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 7:00 a.m. to 3:30 p.m. Monday-Friday.

The current fax number for all official faxes is (571) 273-8300. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY  
December 09, 2007



MARIE YAMNITZKY  
PRIMARY EXAMINER

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